

Twenty-Eighth Annual Report

Arkansas River

Compact

Administration

(1976)

For the Report-Year

November 1, 1975 to October 31, 1976

LAMAR, COLORADO

December 14, 1976

THE ADMINISTRATION

FRANK G. COOLEY

Chairman and Representative of the United States

ROBERT TEMPEL, HARRY BATES JR., and FELIX L. SPARKS
for Colorado

CARL E. BENTRUP, M. P. REEVE, and GUY E. GIBSON
for Kansas

800 South Eighth Street
Lamar, Colorado 81052

TABLE OF CONTENTS

1. Members of the Administration	3
2. Officers of the Administration	3
3. Standing Committees	4
4. Meetings	4
5. Fiscal	4
6. Facts about John Martin Reservoir Project	6
7. Cooperative Studies and Activities	8
8. Water Supply, Reservoir Operation, and Hydrologic Data	8
9. Gaging Stations	9
10. Findings of Fact by the Administration	10

Appendices:

Appendix "A" Auditor's Report	12
Appendix "B-1" Daily Discharges; Arkansas River near Pueblo, Colorado	16
Appendix "B-2" Daily Discharges; Arkansas River at Las Animas, Colorado	17
Appendix "B-3" Daily Discharges; Purgatoire River near Las Animas, Colorado	18
Appendix "B-4" River Flow into John Martin Reservoir	19
Appendix "B-5" Daily Contents, John Martin Reservoir	20
Appendix "B-6" Outflow from John Martin Reservoir	21
Appendix "B-7" Daily Discharges; Arkansas River at Lamar, Colorado	22
Appendix "B-8" Daily Discharges; Arkansas River at Colorado-Kansas Stateline	23
Appendix "B-9" Demands by Colorado for Reservoir Water	24
Appendix "B-10" Demands by Colorado for River Flow	25
Appendix "B-11" Demands by Kansas for Reservoir Water	26
Appendix "B-12" Stateline Flows on Days of Kansas Demands	27
Appendix "B-13" Diversions by Ditches in Colorado Water Districts 14 and 17	28
Appendix "B-14" Diversions by Ditches in Colorado Water District 67	29
Appendix "B-15" Diversions by Ditches in Kansas, Stateline to Garden City	30
Appendix "B-16" Summary Tabulation	31
PLATE 1 River Flow, Outflow, and Contents of John Martin Reservoir and Stateline Flow.	

**Annual Report Of
ARKANSAS RIVER COMPACT
ADMINISTRATION
(1976)**

Report-Year November 1, 1975 to October 31, 1976

TO: THE PRESIDENT OF THE UNITED STATES AND THE
GOVERNORS OF THE STATES OF COLORADO AND KANSAS

Sirs:

Pursuant to Article VII of the Arkansas River Compact, the Arkansas River Compact Administration submits its report for the Report-year November 1, 1975 through October 31, 1976, as follows:

1. Members of the Administration

Representative of the United States:

Frank G. Cooley

Colorado Representatives:

Harry Bates Jr., Holly, Colorado
Robert Tempel, Wiley, Colorado
Felix L. Sparks, Denver, Colorado

Kansas Representatives:

Carl E. Bentrup, Deerfield, Kansas
M. P. Reeve, Garden City, Kansas
Guy E. Gibson, Topeka, Kansas

2. Officers of the Administration

Chairman:

Frank G. Cooley

Vice Chairman:

Carl E. Bentrup

Secretary:

Lane L. Hackett

Treasurer:

Harry Bates Jr.

3. Standing Committee

Administrative and Legal Committee:

Felix L. Sparks (Chairman)
M. P. Reeve

Engineering Committee:

Guy E. Gibson (Chairman)
Robert Tempel

Operations Committee:

Harry Bates, Jr. (Chairman)
Carl E. Bentrup

The Representative of the United States is an ex-officio member of all standing committees.

4. Meetings:

December 9, 1975	Annual Meeting
April 7, 1976	Special Telephonic Meeting
May 4-5, 1976	Special Meeting in Garden City, Kansas
August 5, 1976	Special Telephonic Meeting
August 13-14, 1976	Special Meeting in Aspen, Colorado
November 29, 1976	Special Telephonic Meeting

5. Fiscal:

(a) Balance on hand November 1, 1975.....\$11,752.00
(b) Receipts: State of Colorado..... 4,980.00
 State of Kansas..... 3,320.00
(c) Total funds available\$20,052.00
(d) Disbursements by the Administration:

Voucher

Date	No.	Payee — Purpose	
11/30/75	251	Lane L. Hackett — Salary.....	\$423.68
		Travel	153.96
		Postage.....	20.00
11/30/75	252	Mountain Bell — Telephone	597.64
11/30/75	253	Joetta Hackett — Typing	27.10
12/29/75		Thomas H. Cavanagh — Certified Reporter	30.00
12/29/75		Crimond & Schemahorn — Audit	100.00
12/29/75		Federal Reserve Bank — F.I.C.A.	150.00
12/29/75		Mountain Bell — Telephone	52.65
1/30/76	258	Cow Palace Inn — Meeting Room	31.34
1/30/76	259	Mountain Bell — Telephone	15.75
			37.50

2/27/76	260	Lane L. Hackett — Salary	\$423.68	
		Travel	152.76	
		Postage	26.00	602.44
2/27/76	261	Mountain Bell — Telephone		29.51
3/31/76	262	Lamar Daily News — Printing		601.02
3/31/76	263	Mountain Bell — Telephone		22.44
3/31/76	264	U.S.G.S. — Cooperative Agreement		4,000.00
3/31/76	265	Federal Reserve Bank — F.I.C.A.		52.65
5/ 5/76	266	Garden City Country Club — Meeting		167.21
5/ 5/76	267	Wheat Lands Motor Inn — Travel		33.99
5/ 8/76	268	Mountain Bell — Telephone		65.02
6/10/76	269	Lamar Daily News — Printing		16.75
6/10/76	270	Mountain Bell — Telephone		46.74
6/10/76	271	Mid America Reporters — Certified Reporters ..		294.00
6/30/76	272	Lane L. Hackett — Salary	\$423.68	
		Travel	160.20	
		Postage	26.00	
		Office Supplies	12.09	621.97
6/30/76	273	Federal Reserve Bank — F.I.C.A.		52.65
6/30/76	274	Mountain Bell — Telephone		60.57
7/30/76	275	Mountain Bell — Telephone		67.71
8/ 6/76	276	Milne Agents — Treasurers Bond		25.00
8/ 6/76	277	Sears Roebuck & Co. — Office Equipment		80.00
8/13/76	278	Carl E. Bentrup —		
		Meeting Expense Reimbursement		230.25
8/20/76	279	Pomegranite Inn — Meeting		12.50
8/20/76	280	Lane L. Hackett — Travel & Meeting		194.67
9/ 3/76	281	Mountain Bell — Telephone		151.60
9/ 3/76	282	Lane L. Hackett — Salary	\$423.68	
		Travel	162.12	
		Postage	26.00	611.80
9/ 3/76	283	Leila E. Mosher — Certified Reporter		392.50
9/ 3/76	284	Cow Palace Inn — Meeting		10.50
10/ 6/76	285	U.S.G.S. — Cooperative Agreement		1,000.00
10/ 6/76	286	Mountain Bell — Telephone		91.83
2/ 4/76	DM	First National Bank —		
		Office Supplies (Vouchers)		38.48

TOTAL DISBURSEMENTS

\$10,616.00

(e) Balance on hand October 31, 1976

\$ 9,436.00

(f) The budget for fiscal year July 1, 1977 to June 30, 1978 was adopted by the Administration at the special compact meeting in Aspen on August 14, 1976.

PROPOSED BUDGET

*X PROPOSED BUDGET

Fiscal Year July 1, 1977 — June 30, 1978

Personal Service	\$ 2,145.00
Secretary's Salary	\$1,800.00
Social Security	105.00
Professional Services (Audit & Recorder)	240.00
U. S. Geological Survey	14,400.00
Cooperative Services	\$ 4,400.00
Station Monitoring Equipment	10,000.00
Capital Outlay	100.00
Office Equipment	100.00
Maintenance and Operation	4,150.00
Bond (Treasurer)	\$ 25.00
Printing	600.00
Official Publications	100.00
Travel Expense	700.00
Typing and Mailing	150.00
Investigation and Inspection	100.00
Telephone and Telegraph	375.00
Office Supplies	100.00
Contingency	2,000.00
TOTAL BUDGET 1977-1978	\$20,795.00
Estimated Carryover June 30, 1977	100.00
To Be Appropriated	\$20,695.00
Colorado (60%)	\$12,417.00
Kansas (40%)	8,278.00

*Concrete Control 1974-1975	\$8,000.00 paid by Colorado
Colorado (60%)	\$12,417.00
*Credit	3,200.00 9,217.00
Kansas	8,278.00
*Debit	3,200.00 11,478.00

*X AS REVISED AND APPROVED BY THE ARKANSAS RIVER
COMPACT ADMINISTRATION SPECIAL MEETING, ASPEN,
COLORADO, AUGUST 14, 1977.

(g) Pursuant to provisions of the Compact (Article VIII-E(3)) and
of the By-Laws of the Administration (Article VII (5)), the
receipts and disbursements of the Administration during the
compact year have been audited, and the report of the audit is
hereto attached as Appendix "A."

6. Facts about John Martin Project:

The John Martin Reservoir Project was built by the Corps of
Engineers, United States Army. The project was authorized by
Congress in the Flood Control Act of June 22, 1936, when the federal
responsibility for flood control throughout the country was assigned to
the Corps of Engineers. It is located on the Arkansas River, 58 miles

upstream from the Colorado-Kansas stateline and 18 miles upstream from the city of Lamar, Colorado. Construction of the project began in the fall of 1939, but work was suspended by World War II from the spring of 1943 to the spring of 1946. The project was completed in October 1948 at a cost of about \$15 million. The War Department Civil Appropriation Act of June 24, 1940, changed the name of the project from Caddoa Reservoir Project to John Martin Reservoir Project, in honor of the late Congressman John A. Martin of Colorado. It is operated by the United States Army Engineer District, Albuquerque, New Mexico. Mr. Russell Smith has been the resident superintendent of the project since October, 1976.

The John Martin Reservoir Project is part of the comprehensive plan for the control of floods and the development of the water resources of the entire Arkansas River basin. The reservoir provides 270,375 acre-feet of storage capacity for flood control. It protects the fertile Arkansas River Valley below the dam from floods originating in the 18,915 square miles of the Arkansas River basin above the dam. It provides 350,951 acre-feet of storage space for conservation and recreation. John Martin Reservoir supplies water to the irrigated lands below the dam as far as Garden City, Kansas. The top of the conservation pool is 3,851 feet above mean sea level, which provides 350,951 acre-feet of storage for irrigation. The release of stored flood waters in excess of the conservation and recreation pools and above elevation 3,851 feet is planned so that, when combined with flows originating downstream from the dam, the capacity of the channel will not be exceeded. Upon request of the Arkansas River Compact Administration, irrigation water for downstream water users is released through the outlet works in the base of the dam. Downstream flood damages prevented by John Martin Dam already exceed the cost of the project. Benefits have already passed the \$92 million mark.

Recreation and favorable fish and wildlife habitats are derived from this project. With reservoir lands open to all, there are many attractive public use areas for outdoor recreation, water sports, fishing and boating, or just relaxed living. During construction some embankment material was obtained from a 75-acre tract of land immediately downstream of the dam. This excavated area, averaging 12 feet deep, filled with water and formed Lake Hasty, the center of year-round recreation.

John Martin Dam consists of a concrete gravity structure 1,644 feet long and 120 feet high, and an earthfill structure 2,600 feet long. The concrete gravity structure contains a gated spillway provided with sixteen 30 feet by 64 feet tainter gates with their operating machinery. There are earthen wing dams on either side of the main dam. The north wing dam is 3,880 feet long, connecting to the earthfill structure of the main dam at the north abutment. The south wing dam is 5,807 feet long and connects to the south end of the concrete structure of the main dam. A bituminous-surfaced roadway, 21 feet wide, extends along the crest of the north wing dam, main dam, and south wing dam. The overall length of the structure is 2.6 miles. Detailed project data are shown below.

DAM

Total length, feet.....	13,945
Maximum height above streambed, feet	118
Width of roadway on dam, feet.....	21

SPILLWAY

Total length, including piers, feet	1,174
Crest gates, 30' x 64'	16
Discharge capacity, cubic feet per second	639,200

OUTLET WORKS

Sluicing conduits, 6' x 7½'	4
Regulating conduits, 4' x 4'	2

RESERVOIR

Capacity, acre-feet	621,326
Flood control storage, acre-feet	270,375
Conservation (irrigation) and recreation, storage, acre-feet	350,951
Water surface at spillway crest, acres	8,960
Water surface at top of conservation pool, acres	11,655
Water surface at top of flood control pool, acres	17,630
Drainage area, square miles	18,915

A ½-mile of the historic Santa Fe Trail north of the reservoir has been enclosed by a fence. An appropriate sign perpetuates this bit of Americana for posterity.

7. Cooperative Studies and Activities:

(a) Article VIII G (1) of Arkansas River Compact requires the Administration to cooperate with the Chief Official of each of the states of Colorado and Kansas charged with the administration of water rights in their respective States, and with the Federal agencies in systematically determining and correlating the facts pertaining to the flow and diversion of the water of the Arkansas River and to the operation and siltation of John Martin Reservoir and other related structures. Article VIII G (2) requests the Director of the United States Geological Survey, the Commissioner of the United States Bureau of Reclamation, and the Chief of the Engineers, United States Army, to cooperate and collaborate with the Administration and with appropriate State officials in such determinations and correlations of stream flow and related data. Under the By-Laws of the Administration, these cooperative studies and activities are assigned to the Engineering Committee of the Administration.

(b) During the year covered by this report the Administration has received excellent cooperation from all agencies referred to in the foregoing provisions of the Compact. The United States Geological Survey has continued the operation of the compact gaging stations and the analysis and compilation of the hydrologic data presented in this report and used in the administration of the Compact. The Corps of Engineers continued to operate the conservation pool of John Martin Reservoir in accordance with the terms of the Compact and the orders of the Administration.

8. Water Supply, Reservoir Operation, and Hydrologic Data.

The winter storage season for John Martin Reservoir began on November 1, 1975 at 12:01 a.m., with the reservoir empty.

The first demand for river flow was made by Colorado at 12:01 a.m., on November 1, 1975. The river flow demand was continued until 10:00 a.m., November 19, 1975 when Colorado canceled the demand.

River flow averaged approximately 28 cfs during the period of Colorado demand.

On February 17, 1976 Colorado issued a demand for 12 cfs of river flow at 9:00 a.m. This time the release was continued until 8:30 a.m., April 5, 1976 when demands were made by both Colorado and Kansas for conservation water.

On the first day of the summer storage period — April 1, 1976 total conservation storage had reached 10,093 acre feet. However, no demands were made on the conservation pool until April 5, 1976 when conservation storage had increased slightly to 10,110 acre feet. At 8:30 a.m., on April 5th both Colorado and Kansas demanded a release of storage water totaling 1,000 cfs to be apportioned, 600 cfs to Colorado and 400 cfs to Kansas. In cooperation with a U.S.G.S. sediment study, incremental releases of 250 cfs were made at one hour intervals. Beginning at 8:30 a.m., a release was made of 250 cfs. At 9:30 a.m., the release was increased to 500 cfs. At 10:30 a.m., the release was increased to 750 cfs and at 11:30 a.m., the demanded release of 1,000 cfs was obtained. The demand release of 1,000 cfs by Kansas and Colorado was sustained until 6:00 p.m., April 10, 1976 when the reservoir became empty. The river was then administered according to the Colorado priority system. During the release period, problems were encountered in correlating the reservoir releases with Colorado ditch diversions and down river gaging station records.

Sporadic storms during May, June, and July caused some damage to canal structures in Water District #67. In early August, heavy rains occurred in the Purgatoire and Arkansas Basins increasing river flows sufficiently at John Martin Reservoir to justify summer storage. The gates were closed on August 2nd at 7:30 p.m., and immediately a storage release of 1,000 cfs was made to satisfy Colorado and Kansas demands of 600 cfs and 400 cfs respectively. A peak storage of about 2,100 acre feet was obtained. The reservoir was emptied by 9:30 a.m., August 6, 1976. The gates were then left open and the river was administered under the Colorado priority system for the remainder of the water year. The winter storage period began at midnight, October 31, 1976 with the reservoir empty.

9. GAGING STATIONS

In general, streamflow records of satisfactory accuracy were obtained at the compact stations. Emphasis was continued on performing additional field work, within travel constraints, to increase the accuracy of the records and on providing current streamflow data to the Administration and State officials, as required.

The gaging station below John Martin Reservoir and a concrete control was built in April 1975. The cableway was relocated in December 1976.

The control for the Purgatoire River near Las Animas continues to be a problem but the expense of a permanent control is probably not justified. The changing of the stage-discharge relationship by beavers building brush dams just downstream from several of the gages continues to be a problem.

The radio stations at the four gages continue to give trouble because of their age. Plans were initiated to replace the system with satellite-transmitting stations but because the time of receiving the data at the Lamar and Garden City offices was on the order of 12 hours instead of hourly, this plan was dropped. Present plans are to replace the radios

and recording equipment as soon as possible.

The Administration approved a cooperative agreement with the U. S. Geological Survey for the transition quarter July 1, 1976, to September 30, 1976, in the amount of \$2,200 — \$1,100 for each party; and for the fiscal year October 1, 1976, to September 30, 1977, in the amount of \$8,800 — \$4,400 for each party. These funds are for the operation of the compact station at Lamar, the additional field work at other compact stations, the providing of current streamflow data, maintenance of radio equipment, and the preparation of records for the Annual Report.

10. Findings of fact by the Administration

SPECIAL TELEPHONIC MEETINGS

April 7, 1976

A special telephonic meeting was held April 7, 1976 in accordance with Article V-F of the Compact, for the purpose of declaring that the reservoir would become empty April 10, 1976. Mr. C. J. Kuiper, Colorado State Engineer, and Mr. Robert Jesse, Division Engineer were notified of this action and the administration of decreed water rights for Colorado would commence on April 10, 1976, unless a change of conditions justified cancellation or modification of this notice. The reservoir became empty at 6:00 P.M., April 10, 1976.

Participating members:

For Colorado — Mr. Bates and Mr. Tempel

For Kansas — Mr. Bentrup and Mr. Reeve.

August 5, 1976

A special telephonic meeting was held August 5, 1976 in accordance with Article V-F of the Compact, for the purpose of declaring that the reservoir would become empty August 6, 1976. Mr. C. J. Kuiper, Colorado State Engineer, and Robert Jesse, Division Engineer were notified of this action and the administration of decreed water rights for Colorado would commence August 6, 1976, unless a change of conditions justified cancellation or modification of this notice. The reservoir became empty at 9:30 A.M., August 6, 1976.

Participating members:

For Colorado — Mr. Bates and Mr. Tempel

For Kansas — Mr. Bentrup and Mr. Reeve.

November 29, 1976

A special telephonic conference was held November 29, 1976 at 1:40 P.M. for consideration and action on the Resolution concerning AMITY-GREAT PLAINS WATER STORAGE in John Martin Reservoir as had previously been presented and reviewed.

The Resolution, as attached hereto, was unanimously approved by both States, subject to further discussion at the annual meeting December 14, 1976. Mr. Carl Bentrup, not available at conference time, voted by proxy for Mr. Guy Gibson and himself at a later time of the day.

All entities involved in the Resolution were informed of this action.

Participating members:

Mr. Frank Cooley, Chairman

For Colorado: Mr. Felix Sparks, Mr. Bates, Mr. Tempel

For Kansas: Mr. M. P. Reeve, Mr. Carl Bentrup and Mr. Guy Gibson by proxy.

APPENDICES FOR ANNUAL REPORT OF THE ARKANSAS RIVER COMPACT ADMINISTRATION

For the Report-Year
November 1, 1975, to October 31, 1976

Appendices:	
Appendix "A"	Auditor's Report12
Appendix "B-1"	Daily Discharges; Arkansas River near Pueblo, Colorado16
Appendix "B-2"	Daily Discharges; Arkansas River at Las Animas, Colorado17
Appendix "B-3"	Daily Discharges; Purgatoire River near Las Animas, Colorado18
Appendix "B-4"	River Flow into John Martin Reservoir19
Appendix "B-5"	Daily Contents, John Martin Reservoir20
Appendix "B-6"	Outflow from John Martin Reservoir21
Appendix "B-7"	Daily Discharges; Arkansas River at Lamar, Colorado22
Appendix "B-8"	Daily Discharges; Arkansas River at Colorado-Kansas Stateline23
Appendix "B-9"	Demands by Colorado for Reservoir Water24
Appendix "B-10"	Demands by Colorado for River Flow25
Appendix "B-11"	Demands by Kansas for Reservoir Water26
Appendix "B-12"	Stateline Flows on Days of Kansas Demands27
Appendix "B-13"	Diversions by Ditches in Colorado Water Districts 14 and 1728
Appendix "B-14"	Diversions by Ditches in Colorado Water District 6729
Appendix "B-15"	Diversions by Ditches in Kansas, Stateline to Garden City30
Appendix "B-16"	Summary Tabulation31
PLATE 1	River Flow, Outflow, and Contents of John Martin Reservoir and Stateline Flow.

APPENDIX "A"

AUDITOR'S REPORT

Crimond, Schemahorn & Co.,

CERTIFIED PUBLIC ACCOUNTANTS

203 East Oak
Lamar, Colorado 81052

To the Representatives
Arkansas River Compact Administration
Lamar, Colorado 81052

Gentlemen:

We have examined the Statement of Assets & Liabilities Arising from Cash Transactions of the Arkansas River Compact Administration as of October 31, 1976, and the Statement of Cash Receipts and Disbursements and Changes in Cash Balance for the fiscal year then ended. We have also examined the Statement of Cash Receipts and Disbursements with Budget Comparison for the budget year ended June 30, 1976. Our examination was conducted in accordance with generally accepted auditing standards, and included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, Exhibits A & B, present fairly the Assets & Liabilities arising from Cash Transactions of the Arkansas River Compact Administration at October 31, 1976, and the results of Cash Transactions for the fiscal year then ended and Exhibit C presents fairly the cash transactions of the budget year ended June 30, 1976, on a basis consistent with that of the previous year.

Crimond, Schemahorn & Co.

Lamar, Colorado
November 12, 1976

EXHIBIT A

ARKANSAS RIVER COMPACT ADMINISTRATION STATEMENT OF ASSETS AND LIABILITIES ARISING FROM CASH TRANSACTIONS OCTOBER 31, 1976

ASSETS:

Cash	\$ 9,436
Equipment	1,715
Concrete Control	8,000
TOTAL ASSETS	\$19,151

LIABILITIES:**CASH BASIS EQUITY:****Expended:**

Equipment	\$1,715	
Concrete Control	8,000	\$9,715
Unexpended:		9,436
TOTAL CASH BASIS EQUITY — NOTE 1		19,151
TOTAL LIABILITIES & CASH BASIS EQUITY		\$19,151

The accompanying notes are an integral
part of the financial statements.

EXHIBIT B

ARKANSAS RIVER COMPACT ADMINISTRATION
STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS AND
CHANGES IN CASH BALANCE
FOR THE FISCAL YEAR ENDED OCTOBER 31, 1976

CASH IN BANK, NOVEMBER 1, 1975 \$11,752

RECEIPTS:**Revenue from Assessments:**

Colorado	4,980
Kansas	3,320

TOTAL RECEIPTS \$ 8,300

DISBURSEMENTS:

U. S. Geological Survey — Cooperative Services	\$5,000
Insurance	25
Professional Fees	150
Office Supplies	51
Printing	618
Secretary's Salary — Net	1,695
Payroll Taxes	158
Telephone	631
Typing & Mailing	128
Travel & Meetings	1,294
Certified Reporter	786
Office Equipment	80
TOTAL DISBURSEMENTS	10,616
EXCESS OF DISBURSEMENTS OVER RECEIPTS	(2,316)

CASH BALANCE, OCTOBER 31, 1976 \$ 9,436

The accompanying notes are an integral
part of the financial statements.

EXHIBIT C

ARKANSAS RIVER COMPACT ADMINISTRATION STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS WITH BUDGET COMPARISON FOR THE BUDGET YEAR JULY 1, 1975 TO JUNE 30, 1976

	ACTUAL	BUDGET
CASH IN BANK, JULY 1, 1975	\$ 4,137	\$ 100
RECEIPTS:		
Revenue from Assessments:		
Colorado — 60%	5,034	5,034
Kansas — 40%	3,356	3,356
TOTAL RECEIPTS	8,390	8,390
TOTAL TO ACCOUNT FOR	12,527	8,490
DISBURSEMENTS:		
U. S. Geological Survey — Gauging	4,000	4,400
Secretary's Salary — Net	1,695	1,800
Insurance	7	25
Telephone	428	375
Payroll Taxes	211	125
Typing & Mailing	122	125
Travel & Meetings	847	600
Professional Fees	150	140
Office Supplies	12	100
Printing	656	500
Certified Reporter	394	---
Office Equipment	---	100
Office Publications	---	100
Investigation & Inspection	---	100
TOTAL DISBURSEMENTS	8,522	8,490
CASH IN BANK, JUNE 30, 1976	\$ 4,005	\$ ---

The accompanying notes are an integral
part of the financial statements.

ARKANSAS RIVER COMPACT ADMINISTRATION
NOTES TO CASH BASIS STATEMENTS
OCTOBER 31, 1976

Note 1 — Summary of significant accounting policies:

- a. The Administration maintains financial records using the cash basis of accounting. By using the cash basis of accounting certain key accounts needed to present financial position and results of operations are omitted; examples of these accounts are accounts receivable and accounts payable.

APPENDIX 'B-1'

Arkansas River

Near Pueblo, Colorado

ARKANSAS RIVER ABOVE PUEBLO, COLORADO
Report-Year ending October 31, 1976
USGS Records—Provisional; Subject to Revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	208	239	101	103	264	122	618	1130	892	963	328	414
2	208	164	94	103	218	138	520	1340	1290	1690	356	396
3	268	160	82	103	198	180	540	1760	1530	1650	288	382
4	310	160	82	105	202	185	555	1790	1350	2820	244	427
5	252	133	82	105	202	286	575	1780	1270	2880	250	500
6	223	120	84	105	202	376	625	2030	1230	794	215	500
7	225	120	86	105	202	335	656	2300	1060	535	215	468
8	229	120	86	103	200	306	646	2280	1010	545	232	450
9	235	120	86	103	195	333	673	2140	811	476	218	458
10	247	120	86	101	195	450	646	2160	865	555	274	440
11	250	120	87	103	185	481	580	2250	1050	686	271	414
12	235	122	86	101	208	535	620	2180	1110	967	238	418
13	226	122	86	101	218	560	630	1780	1110	913	208	422
14	250	124	87	101	218	570	688	1480	1160	871	625	427
15	271	124	87	101	198	570	695	1480	1180	778	708	427
16	271	124	87	101	170	555	695	1110	1020	739	288	392
17	285	124	87	101	162	545	700	1440	1020	694	271	364
18	289	115	87	101	146	540	841	1250	973	694	292	380
19	320	99	87	101	158	520	1000	1260	982	685	274	380
20	372	101	87	103	164	510	1030	1150	1000	690	316	380
21	372	101	89	108	158	490	1020	1090	1010	722	384	380
22	360	105	89	103	150	490	1110	1160	1060	535	254	380
23	360	108	89	103	148	490	1240	1400	823	372	254	384
24	364	108	87	103	142	505	1160	1790	662	316	247	360
25	360	110	87	105	118	476	937	1930	610	332	250	336
26	356	108	87	105	105	372	841	1640	595	352	507	306
27	360	106	87	105	103	762	678	1320	565	316	1020	296
28	348	106	87	105	96	783	722	1160	656	282	1260	310
29	340	105	87	145	84	728	800	949	744	278	727	320
30	340	99	94	84	84	700	985	734	937	278	510	299
31		99	103		101		1120		829	278		288
TOTAL												
sec.ft.	8745	3786	2723	3027	5204	13904	24126	47263	30494	24658	11525	12108
ac.ft.	17350	7510	5400	6000	10320	27360	47850	93750	60480	48910	22860	24020
a) ac.ft.	0	0	0	0	0	6499	15375	9222	10902	10062	28	0
b) ac.ft.	17350	7510	5400	6000	10320	21080	32480	84530	49680	38850	22830	24020

THE YEAR 372,000 acre-ft.
CORRECTED 320,000 acre-ft.

a) Less upstream reservoir and transmountain water.
b) Corrected total ac. ft.

APPENDIX 'B-2'

Arkansas River

At Las Animas, Colorado

ARKANSAS RIVER AT LAS ANIMAS, COLORADO
Report-Year ending October 31, 1976
USGS Records - Provisional; Subject to Revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	12	42	24	40	18	11	17	204	141	64	16	378
2	11	46	19	38	16	10	29	290	89	588	18	275
3	11	44	19	36	12	11	26	366	110	533	18	196
4	11	43	19	30	10	11	14	426	353	1690	17	174
5	11	43	35	19	12	11	11	604	492	278	17	174
6	11	42	30	24	15	11	11	548	444	101	17	171
7	11	42	28	39	18	11	11	520	345	118	17	174
8	10	42	25	40	17	11	11	504	320	504	19	224
9	10	39	25	22	17	11	11	248	248	320	18	265
10	11	37	40	21	19	11	9.8	335	177	108	14	240
11	11	36	70	19	18	12	9.8	432	126	102	14	180
12	11	32	60	18	19	12	9.8	492	52	59	13	174
13	11	30	55	19	19	12	8.9	468	29	46	11	177
14	11	27	65	20	16	11	8.9	462	24	38	14	177
15	11	21	38	20	16	12	8.5	492	29	34	33	168
16	11	19	32	20	16	12	8.5	492	149	25	129	188
17	11	19	29	19	16	11	8.5	504	81	20	150	192
18	11	19	28	20	17	10	8.5	390	126	18	91	216
19	10	28	26	19	19	11	8.5	408	49	18	20	188
20	10	33	27	20	18	11	8.0	296	24	17	12	162
21	10	32	27	18	19	11	20	270	76	16	18	180
22	10	33	28	17	16	11	208	244	46	15	55	171
23	12	33	25	20	16	12	285	177	52	14	30	171
24	12	33	24	20	16	11	378	138	23	15	23	168
25	10	33	24	19	16	11	534	204	40	14	12	165
26	10	34	30	18	17	11	612	488	135	14	9.8	162
27	30	31	46	19	14	11	432	528	69	13	228	228
28	40	26	50	19	12	11	320	486	22	12	371	270
29	30	25	50	19	12	12	224	315	16	12	652	285
30	25	26	48	12	12	14	165	216	15	12	528	265
31	28	28	44	12	12	14	184		14	14		244
TOTAL												
sec. ft.	406	1019	1080	672	480	338	3600.7	11556	3916	4952	2386.6	6402
ac. ft.	895	2020	2160	1330	972	670	7140	22920	7770	9820	4690	12700
THE YEAR 73,010 acre-ft.												

APPENDIX 'B-3'

Purgatoire River Near Las Animas, Colorado

PURGATOIRE RIVER NEAR LAS ANIMAS, COLORADO
Report-Year ending October 31, 1976
USGS Records—Provisional; Subject to Revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	5.8	2.1	2.8	1.6	1.6	1.8	2.3	2.1	0.50	2.1	0.88	1.3
2	2.2	2.2	2.2	1.5	1.5	1.8	2.3	2.0	.45	2270	.88	1.8
3	2.2	2.1	2.4	1.6	2.7	1.7	2.8	2.2	.45	1370	.88	1.8
4	1.5	2.1	2.2	1.7	16	1.8	2.6	2.0	.35	113	.88	1.8
5	2.2	2.1	2.1	1.6	2.1	2.0	2.6	1.8	.35	38	.88	1.8
6	2.8	2.2	2.3	1.6	1.3	2.1	2.4	2.2	.18	12	.88	1.8
7	14	2.2	2.4	1.8	1.3	2.1	2.3	376	.18	4.0	.88	1.8
8	2.2	2.2	2.3	1.8	11	2.2	3.3	224	.20	2.4	.88	1.6
9	3.6	2.2	2.3	2.0	8.8	2.2	3.0	39	.30	1.7	.88	2.2
10	2.8	2.3	2.3	1.8	1.5	2.3	2.6	6.6	.40	1.7	.97	3.3
11	3.6	2.3	2.3	3.6	1.5	2.4	2.4	3.9	.45	1.5	.97	5.0
12	4.4	2.3	2.4	1.7	1.7	2.3	2.4	2.3	.45	1.3	.97	4.0
13	4.4	2.3	2.8	1.5	1.7	2.4	2.3	2.0	.55	.88	.88	4.3
14	5.2	2.3	3.3	1.7	1.8	2.2	2.3	2.1	.35	.88	.88	6.5
15	6.0	2.3	5.5	1.6	2.0	2.3	2.6	2.0	.45	.79	.79	10
16	6.0	2.3	9.1	1.5	2.0	2.3	2.7	2.1	.40	.60	.88	6.5
17	3.6	2.3	12	1.6	2.0	2.1	2.8	2.1	.45	.79	.88	4.3
18	3.6	2.3	12	1.7	2.0	2.1	2.8	2.1	.60	.97	1.1	7.0
19	17	2.3	10	1.7	1.8	2.0	2.7	2.1	.60	.88	1.2	6.0
20	5.2	2.3	2.6	1.8	1.8	2.1	2.7	2.3	.88	.97	1.4	4.3
21	3.6	2.3	2.3	1.6	1.8	2.0	2.7	2.1	12	.70	1.2	5.5
22	2.8	2.3	2.2	1.3	1.8	2.1	2.7	2.6	105	.88	1.2	10
23	3.6	2.3	2.1	1.2	2.0	2.0	2.6	2.3	477	.88	.97	12
24	3.6	2.3	2.0	1.2	2.0	1.8	2.4	1.5	80	.88	.97	11
25	3.6	2.1	1.7	1.2	2.0	2.1	37	1.7	20	.97	.97	13
26	2.6	2.1	1.7	1.2	2.0	2.1	31	1.4	70	.79	1.1	10
27	3.6	2.1	1.7	1.3	2.0	2.0	20	1.2	9.8	.97	1.2	10
28	2.8	3.5	1.6	1.3	1.8	2.1	25	1.4	2.1	.97	1.4	4.1
29	2.8	6.5	1.7	1.3	1.8	2.1	3.1	.97	1.2	.88	1.5	10
30	2.2	3.8	1.8	1.3	1.8	2.6	2.3	.60	1.1	.88	1.4	11
31		2.8	1.8		1.8		2.3		1.5	.88		12
TOTAL	129.7	75.8	105.9	47.0	86.4	63.1	183.0	686.67	788.44	3834.14	30.75	185.5
sec. ft.	257	152	210	83	171	125	363	1380	1560	7610	61	368
ac. ft.												
												THE YEAR 12,350 acre-ft.

APPENDIX 'B-4'

River Flow Into John Martin Reservoir

RIVER FLOW INTO JOHN MARTIN RESERVOIR
Report-Year ending October 31, 1976
USGS Records - Provisional; Subject to Revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	18	44	27	42	20	13	19	206	142	66	17	379
2	13	48	21	40	18	12	31	292	89	2860	19	277
3	13	46	21	38	15	13	29	368	110	1900	19	198
4	12	45	21	32	28	13	17	428	353	1800	18	176
5	13	45	37	21	14	13	14	606	492	316	18	176
6	14	44	32	26	16	13	13	550	444	113	18	173
7	25	44	30	41	19	13	13	896	345	122	18	176
8	12	44	27	42	28	13	14	728	320	565	20	226
9	14	41	27	24	26	13	14	287	248	322	19	267
10	14	38	42	23	20	13	12	342	177	170	15	243
11	15	38	72	23	20	14	12	436	126	104	15	185
12	15	34	62	20	21	14	12	494	52	60	14	178
13	15	32	58	20	21	14	11	470	30	47	12	181
14	16	29	68	22	18	13	11	464	25	39	15	184
15	17	23	44	22	18	14	11	494	29	35	34	178
16	17	21	41	22	18	14	11	494	149	26	130	186
17	15	21	41	21	18	13	11	506	81	21	151	186
18	15	21	40	22	19	12	11	392	127	19	92	223
19	27	31	36	21	21	13	11	410	90	19	21	194
20	15	35	30	22	20	13	11	297	25	18	13	166
21	14	34	29	20	21	13	23	272	88	17	19	186
22	13	35	30	18	18	13	211	247	151	16	56	181
23	16	35	27	21	18	14	288	179	529	15	31	183
24	16	35	26	21	18	13	390	140	103	16	24	179
25	14	35	26	20	18	13	571	206	90	15	13	173
26	13	36	32	19	19	13	643	499	205	15	11	172
27	34	33	48	20	16	13	452	529	79	14	11	238
28	43	30	52	20	14	13	345	487	24	13	372	274
29	33	32	52	20	14	14	227	316	17	13	654	265
30	27	30	50	20	14	17	197	217	16	13	539	276
31	31	31	46	14	14	17	198	217	16	15	256	256
TOTAL	538	1091	1195	723	580	399	3781	12252	4702	8785	2398	6589
sec. ft.	1070	2160	2370	1430	1150	791	7500	24300	9330	17430	4760	13070
ac. ft.												
THE YEAR 85,360 acre-ft.												

APPENDIX 'B-5'

Contents Of

John Martin Reservoir

CONTENTS OF JOHN MARTIN RESERVOIR

Report-Year ending October 31, 1976
 Corps of Engineers records -- Provisional, Subject to Revision
 Midnight contents in acre-feet from capacity table dated Nov. 1, 1972

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	0	2346	5633	7855	9269	10110	0	0	0	0	0	0
2	0	2492	5671	7930	9285	10083	0	0	0	1147	0	0
3	0	2625	5722	8005	9317	10083	0	0	0	1739	0	0
4	0	2781	5773	8066	9388	10110	0	0	0	2079	0	0
5	0	2883	5837	8096	9447	9107	0	0	0	1075	0	0
6	0	3022	5941	8172	9512	7559	0	0	0	0	0	0
7	0	3207	6006	8248	9611	5308	0	0	0	0	0	0
8	0	3354	6072	8309	9743	3335	0	0	0	0	0	0
9	0	3458	6138	8385	9792	1657	0	0	0	0	0	0
10	0	3583	6178	8447	9826	0	0	0	0	0	0	0
11	0	3701	6244	8540	9875	0	0	0	0	0	0	0
12	0	3803	6338	8602	9875	0	0	0	0	0	0	0
13	0	3906	6405	8664	9875	0	0	0	0	0	0	0
14	0	4021	6473	8711	9875	0	0	0	0	0	0	0
15	0	4107	6568	8758	9908	0	0	0	0	0	0	0
16	0	4226	6651	8821	9925	0	0	0	0	0	0	0
17	0	4336	6733	8916	9958	0	0	0	0	0	0	0
18	0	4392	6858	8916	9992	0	0	0	0	0	0	0
19	272	4470	6928	8916	9992	0	0	0	0	0	0	0
20	580	4584	7013	8948	9992	0	0	0	0	0	0	0
21	1160	4687	7084	8980	9992	0	0	0	0	0	0	0
22	1023	4780	7155	8995	9958	0	0	0	0	0	0	0
23	1160	4862	7226	9043	10009	0	0	0	0	0	0	0
24	1331	4956	7312	9091	10009	0	0	0	0	0	0	0
25	1573	5040	7385	9107	10009	0	0	0	0	0	0	0
26	1750	5124	7443	9156	10009	0	0	0	0	0	0	0
27	1845	5209	7516	9186	10042	0	0	0	0	0	0	0
28	1960	5283	7589	9220	10042	0	0	0	0	0	0	0
29	2121	5369	7662	9236	10059	0	0	0	0	0	0	0
30	2253	5457	7736	9276	10076	0	0	0	0	0	0	0
31		5557	7781		10093		0	0	0	0	0	0

APPENDIX 'B-6'

Outflow From

John Martin Reservoir

OUTFLOW FROM JOHN MARTIN RESERVOIR

Report Year ending October 31, 1976

USGS Records - Provisional; Subject to Revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	23	1.8	1.6	1.2	1.3	1.3	33	172	208	23	14	420
2	25	2.0	1.6	1.2	1.3	1.3	36	211	144	371	22	360
3	25	1.6	1.8	1.2	1.3	1.3	48	256	111	1060	24	268
4	25	1.6	1.8	1.2	1.3	1.3	45	296	155	1120	24	232
5	25	1.6	1.8	1.2	1.3	1.3	34	389	368	1290	23	236
6	24	1.6	1.6	1.2	1.3	1.3	30	535	368	599	21	222
7	24	1.6	1.6	1.2	1.3	1.3	27	490	368	162	19	218
8	26	1.6	1.6	1.2	1.3	1.3	26	806	284	414	17	242
9	27	1.6	1.6	1.2	1.3	1.3	27	340	268	458	18	280
10	27	1.6	1.6	1.2	1.3	1.3	29	300	200	272	22	288
11	27	1.6	1.6	1.2	1.3	1.3	27	428	155	190	18	260
12	24	1.6	1.6	1.2	1.3	1.3	26	436	108	144	13	250
13	27	1.6	1.6	1.2	1.3	1.3	24	530	60	102	11	246
14	28	1.6	1.6	1.2	1.3	1.3	22	505	44	81	11	250
15	28	1.6	1.6	1.2	1.3	1.3	22	530	36	72	12	239
16	27	1.6	1.6	1.2	1.3	1.3	22	515	64	56	56	239
17	27	1.6	1.6	1.2	1.3	1.3	29	525	108	44	105	232
18	28	1.6	1.6	1.3	1.3	1.3	28	475	99	33	176	250
19	8.9	1.6	1.4	1.3	1.3	1.3	27	396	105	28	90	272
20	1.8	1.6	1.2	1.3	1.3	1.3	21	392	53	25	45	236
21	2.0	1.6	1.2	1.3	1.3	1.3	19	304	56	23	31	228
22	1.8	1.6	1.2	1.3	1.3	1.3	27	284	90	22	30	228
23	1.8	1.6	1.2	1.3	1.3	1.3	26	225	228	313	21	222
24	1.8	1.6	1.2	1.3	1.3	1.3	26	327	180	211	20	225
25	1.8	1.6	1.2	1.3	1.3	1.3	25	419	152	20	44	214
26	1.8	1.6	1.2	1.3	1.3	1.3	25	570	327	124	18	222
27	1.8	1.6	1.2	1.3	1.3	1.3	25	470	515	186	15	228
28	1.8	1.6	1.2	1.3	1.3	1.3	25	376	470	90	14	27
29	1.8	1.6	1.2	1.3	1.3	1.3	26	280	400	49	14	292
30	1.8	1.6	1.2	1.3	1.3	1.3	21	280	34	13	545	284
31		1.6	1.2	1.3	1.3	1.3	176		28	12		268
TOTAL	495.9	50.2	45.4	183.4	402	6049	3698	11677	4618	6676	2198	7851
sec. ft.	984	100	90	364	797	12000	7330	23160	9180	13240	4360	15770
THE YEAR 87,360 acre-ft.												

APPENDIX 'B-7'

Arkansas River

At Lamar, Colorado

ARKANSAS RIVER AT LAMAR, COLORADO
Report-Year ending October 31, 1976
USGS Records - Provisional: Subject to Revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	9.2	9.2	11	9.8	6.2	4.4	13	8.6	42	13	1.9	16
2	9.2	11	8.6	9.8	6.8	3.4	13	8.2	52	14	2.2	14
3	9.2	11	8.0	9.2	7.4	2.4	13	8.2	51	349	1.9	16
4	9.8	13	7.4	6.5	6.8	2.4	17	12	30	388	1.1	53
5	9.9	13	7.4	5.0	5.0	8.3	15	33	70	544	.90	18
6	9.2	13	6.8	4.7	4.4	283	13	219	70	416	.90	3.7
7	8.6	13	4.4	6.0	5.6	375	13	88	66	183	.90	3.7
8	8.6	13	5.0	10	5.6	380	12	134	63	132	1.3	3.4
9	8.0	13	5.6	10	3.9	385	12	93	58	94	1.3	8.6
10	5.6	13	6.2	9.8	3.4	380	13	15	61	61	1.3	18
11	2.4	13	7.4	9.8	2.9	124	12	69	43	75	1.1	6.5
12	2.4	13	8.0	9.8	6.8	39	12	73	45	79	.90	11
13	1.9	13	9.2	9.8	6.2	42	12	76	42	46	.70	15
14	1.9	13	6.8	9.8	7.4	32	12	63	25	38	.50	12
15	1.4	9.2	8.0	9.8	7.4	27	12	61	12	47	.50	12
16	1.4	13	9.2	9.2	7.4	24	11	85	11	37	.70	9.6
17	1.4	10	8.6	9.2	7.4	20	11	73	17	22	.75	34
18	1.9	9.8	8.6	9.2	8.0	16	9.8	65	29	13	4.5	21
19	1.9	13	8.6	8.6	8.0	17	8.6	34	29	11	2.2	9.8
20	.90	13	5.6	8.6	7.4	18	8.6	21	30	10	2.8	5.5
21	.90	11	7.4	5.6	8.0	14	8.2	25	385	9.8	2.2	5.8
22	2.9	13	8.0	5.6	9.2	13	81	27	11	8.6	1.6	6.1
23	7.4	13	9.2	8.6	8.6	11	57	39	28	7.0	1.6	6.1
24	8.6	13	9.2	8.6	5.0	9.0	24	37	70	5.8	1.9	7.0
25	8.6	13	9.2	10	5.0	9.8	42	35	55	5.5	2.2	6.7
26	5.6	13	4.4	9.2	5.0	11	787	38	53	4.0	2.2	24
27	7.4	13	6.2	8.6	5.6	10	188	91	66	3.1	3.1	50
28	8.6	11	9.8	8.0	5.0	12	44	67	53	2.2	2.8	22
29	13	11	10	6.8	5.0	14	20	58	47	1.9	29	12
30	7.4	11	10	6.2	6.2	21	9.4	49	20	1.6	26	9
31	13	13	9.2	4.4	4.4	21	9.8	11	11	1.6	6.4	10
TOTAL												
sec. ft.	175.20	377.2	243.0	245.6	191.0	2317.7	1513.4	1726.0	1615	2623.1	100.95	446.9
ac. ft.	348	748	482	487	379	4600	3000	3420	3200	5200	200	886
THE YEAR 22,960 acre-ft.												

APPENDIX 'B-8'

Arkansas River At The Colorado-Kansas Stateline

ARKANSAS RIVER AT THE
COLORADO-KANSAS STATE LINE
Report Year ending October 31, 1976
USGS Records - Provisional; Subject to Revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	15	19	25	30	25	20	35	79	26	69	12	17
2	17	19	20	30	25	19	32	64	28	1810	12	18
3	18	19	20	30	25	21	29	60	52	198	11	23
4	18	16	20	29	26	21	30	52	49	169	11	15
5	17	19	20	27	24	21	30	46	28	208	11	26
6	18	19	23	27	22	23	27	76	26	252	11	28
7	18	19	22	26	29	46	25	117	34	224	8.8	18
8	24	19	22	24	28	115	27	99	29	146	12	16
9	26	22	20	29	28	158	26	88	24	112	10	14
10	24	24	20	29	26	196	24	89	22	83	10	12
11	23	24	25	26	25	213	23	51	19	62	11	11
12	22	24	32	29	25	153	26	46	18	54	9.2	11
13	22	24	32	26	22	92	26	41	19	50	8.4	11
14	23	26	32	26	22	65	26	42	23	46	11	12
15	24	23	29	24	22	54	25	33	19	36	25	12
16	23	22	29	24	24	51	22	32	22	33	11	12
17	23	22	26	26	26	44	22	51	24	29	212	12
18	23	22	26	24	30	40	20	39	23	26	119	17
19	29	22	26	22	26	42	19	36	23	24	29	22
20	19	24	26	31	25	45	19	33	21	20	18	21
21	11	24	26	37	20	42	22	30	101	21	16	20
22	10	24	29	20	21	36	110	28	201	20	14	20
23	15	24	29	22	20	36	53	28	48	21	12	19
24	24	26	29	25	20	36	41	30	32	19	11	18
25	45	26	29	25	21	34	28	34	27	18	12	23
26	57	26	25	25	20	32	1150	30	25	12	10	22
27	52	26	25	25	19	35	543	26	36	15	12	20
28	29	29	28	25	20	41	230	26	30	18	12	27
29	19	29	30	26	24	38	150	25	30	15	14	30
30	25	29	30	29	22	40	111	23	30	13	12	30
31		29	30		20		96		21	16		25

TOTAL
sec. ft. 713 720 805 769 732 1811 3049 1454 1110 3339 687.4 592
ac. ft. 1410 1430 3590 6050 2880 2200 7610 1380 1150
THE YEAR 32,270 acre-ft.

The daily discharges are the sum of the flows of the Arkansas River near Coolidge, Kansas, and the Frontier Ditch.

APPENDIX 'B-9'

Demands By Colorado

For Reservoir Water

DEMANDS BY COLORADO FOR RESERVOIR WATER (CFS)
 Report ending October 31, 1976
 Data Source: U.S. Corps of Engineers and Orders by the Secretary
 Of the Arkansas River Compact Administration (Provisional, Subject to Revision)

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1												
2												
3												
4												
5												
6						359						
7						600						
8						600						
9						600						
10						600						
11						450						
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
TOTAL												
sec. ft.												
ac. ft.												

2151
4265

3209
6363

**DEMANDS BY COLORADO FOR RIVER FLOW -
OPERATION OF RESERVOIR**
Report-Year ending October 31, 1976
Data Source: Colorado State Engineer's Office and Orders of the
Arkansas River Compact Administration
Units in Cubic Feet Per second (Provisional, Subject to Review)

—25—

APPENDIX 'B-11'

Demand By Kansas For Reservoir Water

DEMANDS BY KANSAS FOR RESERVOIR WATER (CFS)

Report ending October 31, 1976
Data Source: Kansas State Board of Agriculture and Orders by the Secretary —
Kansas River Compact Administration (Provisional; Subject to Revision)

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1												
2									1900 MDT: Open	75		
3										400		
4										400		
5												
6						0630 MST: Open	240					
7							400					
8												
9							400					
10												
11						1800 MST: Empty	300					
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
TOTALS												
Sec. Ft.						2140					1433	
Ac. Ft.						4244					2842	

APPENDIX 'B-12'

Stateline Flow On Days Of Kansas Demand*

STATELINE FLOW ON DAYS OF KANSAS DEMAND*

Report Year ending October 31, 1976

USGS Records -- Provisional; Subject to Revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1												
2												
3												
4												
5										208		
6										262		
7										224		
8						115				146		
9						158				112		
10						198						
11						213						
12						153						
13						92						
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

TOTAL

sec. ft.

ac. ft.

THE YEAR 3,710 acre. ft.

942

1870

*Three days' time is allowed for water released from John Martin Reservoir to reach State line.

APPENDIX 'B-13'

Diversion In Ditches By Colorado

DIVERSIONS IN DITCHES BY COLORADO (ACRE-FEET)
DISTRICT #14 & #17 — DIVISION #2
Source: Water Commissioners Monthly Report
Report Year ending October 31, 1976
Provisional Subject to Revision

Name of Canal	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	YEAR
Bessemer (River)	1986	0	0	0	0	4369	6248	8006	7148	6210	4280	4484	46389
Res. or Imported	0	0	0	0	0	0	0	0	0	872	28	0	900
Total: Bessemer	1986	0	0	0	0	4369	6248	8006	7148	7082	4308	4484	47289
Minnequa-Ft. Union	7426	7418	7548	7149	7668	7348	7630	7412	7676	7614	7418	7324	89631
West Pueblo (River)	119	0	0	0	0	36	180	338	178	183	137	47	1218
Excelsior (River)	0	0	0	0	0	0	209	553	246	389	0	0	1397
Res. or Imported	0	0	0	0	0	0	30	0	0	22	0	0	52
Total: Excelsior	0	0	0	0	0	0	239	553	246	411	0	0	1449
Collier	0	0	0	0	0	0	0	81	0	10	0	0	91
Colorado Canal (Riv.)	8670	888	0	0	0	0	0	858	858	2760	0	0	14034
Res. or Imported	0	0	0	0	0	2600	14482	8922	10032	8908	0	0	44854
Total: Colo. Canal	8670	888	0	0	0	2600	14482	9790	10920	11668	0	0	58968
Highline (River)	2710	0	0	0	0	6614	7456	9656	9174	9252	5622	6118	64596
Res. or Imported	0	0	0	0	0	0	0	0	716	184	0	0	900
Total: Highline	2710	0	0	0	0	6614	7456	9656	8890	9436	5622	6118	65496
Oxford Farmers (Rev.)	1302	0	0	0	0	1052	794	4170	1586	1796	1146	1092	14746
Res. or Imported	0	0	0	0	0	0	0	0	124	76	0	0	200
Total: Oxford Farmers	1302	0	0	0	0	1052	794	4170	1710	1872	1146	1092	14946
Total: District #14	22223	8306	7548	7149	16962	20963	23109	31074	26866	26214	18603	19065	232102
Otero	0	0	0	0	0	0	0	754	0	818	0	0	1572
Res. or Imported	0	0	0	0	0	0	0	300	0	0	0	0	300
Total: Otero	0	0	0	0	0	0	0	1054	0	818	0	0	1872
Catlin Canal (Riv)	6000	0	0	0	0	6118	7694	15824	14506	8140	4268	7224	74544
Res. or Imported	0	0	0	0	0	900	0	0	0	0	0	0	900
Total: Catlin	6000	0	0	0	0	7018	7694	15824	14506	8140	4268	7224	75464
Holbrook (River)	652	3260	0	0	0	1894	0	1932	1900	4200	0	0	18218
Res. or Imported	0	0	0	0	0	1800	0	0	0	0	0	0	1800
Total: Holbrook	652	3260	0	0	0	3694	0	1932	1900	4200	0	0	20018
Rocky Ford	2710	1730	474	212	3970	5052	4956	6140	5700	6346	4500	3462	45352
Ft. Lyon Storage	0	8584	8490	3380	0	0	0	0	0	4500	0	0	24954
Ft. Lyon (River)	10310	2776	5990	14540	11008	7777	9575	22730	10994	17664	9760	10814	133472
Res. or Imported	0	0	0	0	0	1189	883	0	0	0	0	0	2072
Kicking Bird	1054	8242	2012	0	0	0	0	0	0	1410	0	0	12718
Total: Ft. Lyon-K.B.	11364	19002	15592	17920	11008	8966	10458	22730	10994	19074	9760	10614	169062
Las Animas Consol.	1866	0	0	0	1340	2058	2062	3960	3176	3294	2318	3412	23908
Total: District #17	22692	24592	18318	19240	21108	22899	24287	51380	36278	46372	20846	24712	333724
Total: Dist. #14 & #17	44915	32886	26866	26389	40090	43962	47396	82454	63144	74586	39449	43777	565828
Res. or Imp. #14 & #17	0	0	0	0	0	6469	15375	9222	10902	10062	28	0	52078
Grand Total	44915	32886	26866	26389	40090	50351	62771	91676	74046	84646	39477	43777	617904

APPENDIX B-14'

Diversions By Ditches In Colorado Water District 67

Division #2

DIVERSION BY DITCHES IN COLORADO WATER DISTRICT #67
DIVISION #2
Report-Year ending October 31, 1976
Source: Water Commissioners Monthly Report
Units in Acre-Feet (Provisional, Subject to Revision)

Name of Ditch	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	YEAR
Fort Bent Canal	309	0	0	97	133	1323	1319	1987	1810	1227	851	1631	10687
Reese Ditch	494	0	0	75	504	811	859	886	903	787	769	284	6242
Amity Canal	0	0	0	0	0	2998	5180	12451	1868	3187	832	9791	36427
Lamar Canal	981	904	946	805	1102	2021	1455	4146	3143	2213	1563	4336	23615
Hyde Ditch	0	0	0	0	0	89	75	12	0	0	0	0	176
Marvel Canal	0	0	0	0	69	0	32	0	36	65	24	0	226
X, Y & Graham Canals	0	0	0	0	0	171	278	529	55	236	95	0	1364
Buffalo Canal	242	0	0	0	0	3189	2899	3000	3461	2929	1596	1130	18599
Sisson-Stubbs Canal	0	0	0	0	0	0	0	0	0	0	0	0	0
Total: District	2016	904	946	977	1971	10602	11897	23011	11396	10644	5320	17152	97336
Trans-Mtn. Diversions	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	2016	904	946	977	1971	10602	11897	23011	11396	10644	5320	17152	97336

APPENDIX 'B-15'

Diversions By Ditches In Kansas

DIVERSIONS BY DITCHES IN KANSAS
Report-Year ending October 31, 1976
Source of Information: Frontier Ditch — U.S.G.S. Records
Other Ditches — Kansas Division of Water Resources Records
Units in Acre Feet (Subject to Revision)

Name of Ditch	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	YEAR
Frontier Ditch	566	0	0	0	0	1490	1059	743	1168	794	418	554	*6792
Alamo Canal	0	0	0	0	0	0	0	0	0	0	0	0	0
Ft. Aubrey Canal	566	0	0	0	0	1490	1059	743	1168	794	418	554	6792
Total Stateline to Syracuse	0	0	0	0	0	0	0	0	0	0	0	0	0
Amazon Canal	0	0	0	0	0	0	0	0	0	0	0	0	0
Great Eastern Canal	0	0	0	643	740	0	817	1420	0	1910	0	0	5530
South Side Ditch	0	0	0	0	0	1372	1252	146	0	0	0	0	2770
Farmers Ditch	0	0	0	0	0	0	0	0	0	0	0	0	0
Garden City Canal	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Syracuse to Garden City	0	0	0	643	740	1372	2069	1566	0	1910	0	0	8300
Total Stateline to Garden City	566	0	0	643	740	2862	3128	2309	1168	2704	418	554	15092

*4440 Acre Feet Returned Directly to River

APPENDIX 'B-16'

Summary Tabulation

SUMMARY TABULATION
(Acre-feet)

	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	YEAR NO.	FROM APP.
Arkansas River at Las Animas, Colo.	805	2020	2160	1330	972	670	7140	22920	7770	9820	4690	12700	73010	B-2
Purgatoire River near Las Animas, Colo.	257	152	210	93	171	125	363	1390	1560	7610	61	368	12350	B-3
Inflow to John Martin Reservoir	1070	2160	2370	1430	1150	791	7500	24300	9330	17430	4760	13070	85361	B-4*
Reservoir contents at end of month	2253	5557	7781	9226	10093	0	0	0	0	0	0	0	0	B-5
Net change in reservoir contents	+2253	+3304	+2224	+1455	+857	10093	0	0	0	0	0	0	0	B-5
Outflow from John Martin Reservoir	984	100	90	364	797	12000	7330	23160	9160	13240	4360	15770	87360	B-6
Diversions in District 87, Colo.	2016	904	946	977	1971	10602	11897	23011	11396	10644	5820	17152	97336	B-14
Flow at Colorado- Kansas Slateline	1410	1430	1600	1530	1450	3590	6050	2880	2200	7610	1360	1150	32260	B-8
Diversions in Kansas	566	0	0	643	740	2862	3128	2308	1168	2704	418	554	15092	B-15

*Because of computation rules, figures in B-4 are not necessarily the exact sum of B-2 and B-3.

